

What is claimed is:

1. A hand position detecting device comprising:

a first hand wheel;

a second hand wheel which is rotated in response to rotation of the first hand wheel so as to make one rotation as the first hand wheel makes an integral number of rotations;

a light-emitting device which is made to hit regions formed in the second hand wheel permitting light detection via an aperture formed in the first hand wheel to pass incident light, when the first hand wheel and the second hand wheel have reached given positions;

a light-receiving device to detect light made detectable from the regions permitting light detection;

wherein the second hand wheel has the plural regions permitting light detection, the regions being angularly unequally spaced from each other such that the light-receiving device receives the light made detectable when the second hand wheel is at plural intermediate rotational positions other than the given positions.

2. A hand position detecting device set forth in claim 1, wherein the regions of the second hand wheel permitting light detection are reflective surfaces and the light made detectable is reflected light, and wherein the light-receiving device detects the reflected light reflected by the reflective surfaces via the aperture in the first hand wheel to pass

reflected light.

3. A hand position detecting device set forth in claim 2, wherein when the first and the second hand wheels have reached the given positions, the light from the light-emitting device is made to obliquely hit the reflective surfaces on the second hand wheel via the aperture in the first hand wheel to pass incident light, and wherein reflected light reflected by the reflective surfaces obliquely is detected by the light-receiving device via the aperture in the first hand wheel to pass reflected light.

4. A hand position detecting device set forth in claim 2, wherein the aperture to pass incident light and the aperture to pass reflected light consist of a common shared aperture, when the first and the second hand wheels have reached the given positions, the light from the light-emitting device is made to hit the reflective surfaces on the second hand wheel substantially perpendicularly via the shared aperture in the first hand wheel, the shared aperture acting as the aperture to pass incident light, and reflected light reflected substantially perpendicularly at the reflective surfaces is detected by the light-receiving device via the shared aperture acting as the aperture in the first hand wheel to pass reflected light.

5. A hand position detecting device set forth in claim 1, wherein the regions of the second hand wheel permitting

light detection are light transmissive regions, the light made detectable is transmitted hole passed through the light transmissive regions of the second hand wheel, and the light-receiving device detects the transmitted hole from the light transmissive regions.

6. A hand position detecting device set forth in claim 1, wherein the angular interval between the regions of the second hand wheel permitting detection is an integral multiple of an incremental rotation angle through which the second hand wheel rotates when the first hand wheel is rotated once.

7. A hand position detecting device set forth in claim 1, wherein the first hand wheel is a minute wheel, while the second hand wheel is an hour wheel.

8. A hand position detecting device set forth in claim 7, wherein the angular interval between the regions of the hour wheel permitting detection is an integral multiple of 30 degrees.

9. A hand position detecting device set forth in claim 7, wherein the hour wheel has four regions permitting detection including a reference position at which incident light from the light-emitting device is supplied as the light made detectable to the light-receiving device when the hour wheel is at a given position, the four regions being arranged in the direction of rotation, and wherein the angular intervals between adjacent regions of the four regions permitting

detection are 30 degrees, 60 degrees, 120 degrees, and 150 degrees.

10. A hand position detecting device set forth in claim 7, wherein the hour wheel has four regions permitting detection including a reference position at which incident light from the light-emitting device is supplied as the light made detectable to the light-receiving device when the hour wheel is at a given position, the four regions being arranged in the direction of rotation, and wherein the angular intervals between adjacent reflective surfaces of the four regions permitting detection are 30 degrees, 60 degrees, 90 degrees, and 180 degrees.

11. A hand position detecting device set forth in claim 7, wherein after a first one of the regions permitting detection is detected by rotation of the hour wheel, the light-emitting device and the light-receiving device are once stopped from being driven, and wherein each time the hour wheel rotates for an hour, the light-emitting device and the light-receiving device are driven during a time taken to detect whether the light from the light-emitting device is received by the light-receiving device or not in the rotational position.

12. An electronic timepiece comprising:

a hand position detecting device;

wherein the hand position detecting device is comprised a first hand wheel, a second hand wheel which is rotated in

response to rotation of the first hand wheel so as to make one rotation as the first hand wheel makes an integral number of rotations, a light-emitting device which is made to hit regions formed in the second hand wheel permitting light detection via an aperture formed in the first hand wheel to pass incident light, when the first hand wheel and the second hand wheel have reached given positions, a light-receiving device to detect light made detectable from the regions permitting light detection, wherein the second hand wheel has the plural regions permitting light detection, the regions being angularly unequally spaced from each other such that the light-receiving device receives the light made detectable when the second hand wheel is at plural intermediate rotational positions other than the given positions.